

**DIKE, BRONSTEIN, ROBERTS & CUSHMAN, LLP**  
130 Water Street  
Boston, Massachusetts 02109

Page 1 of 5

**DECLARATION AND POWER OF ATTORNEY**

As a below named inventor, I hereby declare that: My residence, post office address and citizenship are as stated below next to my name. I believe I am the original, first and sole inventor (if only one name is listed at 201) below or an original, first and joint inventor (if plural names are listed at 201-208 below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

## SEMICONDUCTOR LASER DEVICE, OPTICAL PICKUP AND FABRICATION

## METHOD OF SEMICONDUCTOR LASER DEVICE

which is described and claimed in:

the specification attached hereto.

the specification in U.S. Application Serial Number \_\_\_\_\_, filed on \_\_\_\_\_.

the specification in PCT international application Number \_\_\_\_\_,  
filed on \_\_\_\_\_; and was amended on \_\_\_\_\_.

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above. I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, §1.56(a). I hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed.

**Prior Foreign/PCT Applications and Any Priority Claims Under 35 U.S.C. 119:**

Application No.	Filing Date	Country	Priority Claimed Under 35 U.S.C. 119?
2000-307462(P)	October 6, 2000	Japan	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
2001-112770(P)	April 11, 2001	Japan	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
			<input type="checkbox"/> YES <input type="checkbox"/> NO
			<input type="checkbox"/> YES <input type="checkbox"/> NO
			<input type="checkbox"/> YES <input type="checkbox"/> NO
			<input type="checkbox"/> YES <input type="checkbox"/> NO
			<input type="checkbox"/> YES <input type="checkbox"/> NO
			<input type="checkbox"/> YES <input type="checkbox"/> NO

I hereby claim the benefit under 35 U.S.C. §120 of any United States application(s) or PCT international application(s) designating the United States of America that is/are listed below, and, insofar as the subject matter of each of the claims of this application is not disclosed in that/those prior application(s) in the manner provided by the first paragraph of 35 U.S.C. §112, I acknowledge the duty to disclose material information as defined in 37 CFR §1.56(a) which occurred between the filing date of the prior application(s) and the national or PCT international filing date of this application:

Prior U.S. Applications or PCT International Applications Designating the U.S.-Benefit Under 35 U.S.C. §120				
U.S. Applications		Status (Check One)		
Application Serial No.	U.S. Filing Date	Patented	Pending	Abandoned
PCT Applications Designating the U.S.				
Application No.	Filing Date	U.S. Serial No. Assigned		

**CLAIM FOR BENEFIT OF PRIOR U.S. PROVISIONAL APPLICATION(S)**  
(35 U.S.C. § 119(e))

I hereby claim the benefit under Title 35, United States Code, §119(e) of any United States provisional application(s) listed below:

Applicant	Provisional Application Number	Filing Date

**POWER OF ATTORNEY:** As a named inventor, I hereby appoint the following attorney(s) with full powers of association, substitution and revocation to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

Sewall P. Bronztein (Reg. No. 16,919)  
David G. Conlin (Reg. No. 27,026)  
George W. Neuner (Reg. No. 26,964)  
Ernest V. Linek (Reg. No. 29,822)

Linda M. Buckley (Reg. No. 31,003)  
Ronald I. Eisenstein (Reg. No. 30,628)  
Henry D. Pahl, Jr. (Reg. No. 20,438)  
Peter J. Manus (Reg. No. 26,766)

David S. Resnick (Reg. No. 34,235)  
Peter F. Corless (Reg. No. 33,860)

SEND CORRESPONDENCE TO:		DIRECT TELEPHONE CALLS TO:	
Dike, Bronstein, Roberts & Cushman, LLP 130 Water Street Boston, Massachusetts 02109		(617) 523-3400	

	FULL NAME OF INVENTOR	LAST NAME SHIOMOTO	FIRST NAME Takehiro	MIDDLE NAME
2 0 1	RESIDENCE & CITIZENSHIP	CITY Kashihara-shi	STATE OR FOREIGN COUNTRY Nara, Japan	COUNTRY OF CITIZENSHIP Japan
	POST OFFICE ADDRESS	POST OFFICE ADDRESS 333-10, Ouzuku-cho	CITY Kashihara-shi	STATE OR COUNTRY AND ZIP CODE Nara, Japan

	FULL NAME OF INVENTOR	LAST NAME NOZAKI	FIRST NAME Kenzo	INVENTOR(S) DELETED ON FILING	MIDDLE NAME ED
2 0 3	RESIDENCE & CITIZENSHIP	CITY Ikoma-shi	STATE OR FOREIGN COUNTRY Nara, Japan	COUNTRY OF CITIZENSHIP Japan	
	POST OFFICE ADDRESS	POST OFFICE ADDRESS 1-39, Sakuragaoka	CITY Ikoma-shi	STATE OR COUNTRY AND ZIP CODE Nara, Japan	

	FULL NAME OF INVENTOR	LAST NAME YOSHIDA	FIRST NAME Toshihiko	INVENTOR(S) DELETED ON FILING	MIDDLE NAME ED
2 0 3	RESIDENCE & CITIZENSHIP	CITY Nara-shi	STATE OR FOREIGN COUNTRY Nara, Japan	COUNTRY OF CITIZENSHIP Japan	
	POST OFFICE ADDRESS	POST OFFICE ADDRESS 25-102, 2-1, Suzaku 5-chome	CITY Nara-shi	STATE OR COUNTRY AND ZIP CODE Nara, Japan	

	FULL NAME OF INVENTOR	LAST NAME HONDA	FIRST NAME Masayuki	MIDDLE NAME
2 0 4	RESIDENCE & CITIZENSHIP	CITY Sakurai-shi	STATE OR FOREIGN COUNTRY Nara, Japan	COUNTRY OF CITIZENSHIP Japan
	POST OFFICE ADDRESS	POST OFFICE ADDRESS 1068-6, Abe	CITY Sakurai-shi	STATE OR COUNTRY AND ZIP CODE Nara, Japan

2 0 5	FULL NAME OF INVENTOR	LAST NAME	FIRST NAME	MIDDLE NAME
2 0 5	RESIDENCE & CITIZENSHIP	CITY	STATE OR FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP
2 0 5	POST OFFICE ADDRESS	POST OFFICE ADDRESS	CITY	STATE OR COUNTRY AND ZIP CODE

2 0 6	FULL NAME OF INVENTOR	LAST NAME	FIRST NAME	MIDDLE NAME
2 0 6	RESIDENCE & CITIZENSHIP	CITY	STATE OR FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP
2 0 6	POST OFFICE ADDRESS	POST OFFICE ADDRESS	CITY	STATE OR COUNTRY AND ZIP CODE

2 0 7	FULL NAME OF INVENTOR	LAST NAME	FIRST NAME	MIDDLE NAME
2 0 7	RESIDENCE & CITIZENSHIP	CITY	STATE OR FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP
2 0 7	POST OFFICE ADDRESS	POST OFFICE ADDRESS	CITY	STATE OR COUNTRY AND ZIP CODE

2 0 8	FULL NAME OF INVENTOR	LAST NAME	FIRST NAME	MIDDLE NAME
2 0 8	RESIDENCE & CITIZENSHIP	CITY	STATE OR FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP
2 0 8	POST OFFICE ADDRESS	POST OFFICE ADDRESS	CITY	STATE OR COUNTRY AND ZIP CODE

I hereby further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Signature of Inventor 201 <i>Takehiko Shiomoto</i> Date: 2001. 9. 25	Signature of Inventor 202 <i>Kenzo Nozaki</i> INVENTOR(S) DELETED ON FILING Date: 2001. 9. 26
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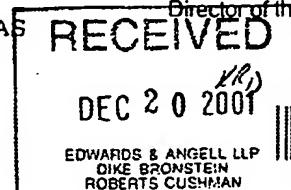
Signature of Inventor 203	<b>INVENTOR(S) DELETED ON FILING</b>	Signature of Inventor 204
<i>Toshihiko Yamauchi</i>		<i>Masayuki Honda</i>
Date:	2001. 9. 20	Date:
Signature of Inventor 205	Signature of Inventor 206	
Date:	Date:	
Signature of Inventor 207	Signature of Inventor 208	
Date:	Date:	

W-37  
105-55-1

UNITED STATES  
PATENT AND  
TRADEMARK OFFICE

DECEMBER 14, 2001

PTAS  
DIKE BRONSTEIN ROBERTS & CUSHMAN  
WILLIAM J. DALEY, JR.  
EDWARDS & ANGELL, LLP  
P.O. BOX 9169  
BOSTON, MA 02209



Under Secretary of Commerce For Intellectual Property and  
Director of the United States Patent and Trademark Office  
Washington, DC 20231  
www.uspto.gov



\*101872727A\*

UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF  
THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS  
AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER  
REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE  
INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA  
PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD  
FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY  
CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723.  
PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE,  
ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY,  
SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 10/04/2001

REEL/FRAME: 012234/0676

NUMBER OF PAGES: 6

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

SHIOMOTO, TAKEHIRO

DOC DATE: 09/25/2001

ASSIGNOR:

NOZAKI, KENZO

DOC DATE: 09/20/2001

ASSIGNOR:

YOSHIDA, TOSHIHIKO

DOC DATE: 09/26/2001

ASSIGNOR:

HONDA, MASAYUKI

DOC DATE: 09/26/2001

ASSIGNEE:

SHARP KABUSHIKI KAISHA  
22-22 NAGAIKE-CHO, ABENO-KU  
OSAKA-SHI  
OSAKA 545-8522, JAPAN

SERIAL NUMBER: 09971207

FILING DATE: 10/04/2001

PATENT NUMBER:

ISSUE DATE:

012234/0676 PAGE 2

JEEVON JONES, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

10-15-2001

Practitioner's Docket No. 56537 (70551)



PATENT

101872727

jc978 U.S. PRO  
09/971207  
04/01  
10/04/01

Box Patent Application  
Assistant Commissioner for Patents  
Washington, D.C. 20231

*10/04/01*

**COVER SHEET FOR ASSIGNMENT (DOCUMENT) ACCOMPANYING  
NEW PATENT APPLICATION (37 CFR 3.31)**

**IDENTIFICATION OF APPLICATION  
(37 CFR 3.21 and 37 CFR 3.31(a)(4))**

1. The  patent application  provisional patent application filed herewith and, to which the attached assignment (document) refers, is identified as follows:

a. Type of application

Application of patent (37 C.F.R. 1.53(b))  
 Continued prosecution (nonprovisional) application (37 C.F.R. 1.53(d))  
 Provisional application (37 C.F.R. 1.51(c))  
 International application (37 C.F.R. 1.431)

b. Date of execution: September 20, 2001 September 25, 2001 and September 26, 2001

*09/971207*  
NOTE: Leave this blank if assignment is for a provisional application.

**CERTIFICATION UNDER 37 C.F.R. 1.10\***

*(Express Mail label number is mandatory.)*

*(Express Mail certification is optional.)*

I hereby certify that this "Cover Sheet for Assignment (Document) Accompanying New Patent Application" and the documents referred to as attached therein are being deposited with the United States Postal Service on this date October 4, 2001, in an envelope as "Express Mail Post Office to Addressee," mailing Label Number EL789785006US, addressed to the: Assistant Commissioner for Patents, Washington, D.C. 20231.

*Fatima H. DeArruda*  
(type or print name of person mailing paper)

*[Signature]*  
Signature of person mailing paper

**WARNING:** Certificate of mailing (first class) or facsimile transmission procedures of 37 C.F.R. 1.8 cannot be used to obtain a date of mailing or transmission for this correspondence.

**\*WARNING:** Each paper or fee filed by "Express Mail" must have the number of the "Express Mail" mailing label placed thereon prior to mailing. 37 C.F.R. 1.10(b).  
"Since the filing of correspondence under § 1.10 without the Express Mail mailing label thereon is an oversight that can be avoided by the exercise of reasonable care, requests for waiver of this requirement will not be granted on petition." Notice of Oct. 24, 1996, 60 Fed. Reg. 56,439, at 56,442.

c. Name of each inventor:

- 1: Takehiro SHIOMOTO
- 2: Kenzo NOZAKI
- 3: Toshihiko YOSHIDA
- 4: Masayuki HONDA

d. Title of invention: SEMICONDUCTOR LASER DEVICE, OPTICAL PICKUP AND FABRICATION METHOD OF SEMICONDUCTOR LASER DEVICE

**NOTE:** 37 C.F.R. § 3.21 states: "If an assignment of a patent application filed under § 1.53(b) is executed concurrently with, or subsequent to, the execution of the patent application, but before the patent application is filed, it must identify the patent application by its date of execution, name of each inventor, and title of the invention so that there can be no mistake as to the patent application intended. If an assignment of a provisional application under 1.53(c) is executed before the provisional application is filed, it must identify the provisional application by name of each inventor and title of the invention so that there can be no mistake as to the provisional application intended."

**NAME OF PARTY(IES) CONVEYING INTEREST (37 CFR 3.31(a)(1))**

2. The party(ies) conveying this interest is (are):

Name 1: Takehiro SHIOMOTO  
Name 2: Kenzo NOZAKI  
Name 3: Toshihiko YOSHIDA  
Name 4: Masayuki HONDA

**NAME AND ADDRESS OF PARTY(IES) RECEIVING INTEREST  
(37 CFR 3.31(a)(2))**

3. The rights are being conveyed to:

Name: Sharp Kabushiki Kaisha  
Address: 22-22 Nagaike-cho, Abeno-ku  
Osaka-shi, Osaka 545-8522 JAPAN

Telephone No.: 011 81 6 6351 4384

**DESCRIPTION OF INTEREST CONVEYED OR TRANSACTION RECORDED  
(37 CFR 3.31 (a)(3))**

4. The accompanying document intends to accomplish:

an assignment  
 a security agreement.  
 a license.  
 a merger.  
 a change of name.  
 a change of address.  
 other.

**NAME AND ADDRESS OF PARTY TO WHOM CORRESPONDENCE  
SHOULD BE MAILED (37 CFR 3.31(a)(5))**

5. Please address correspondence to:

Name: William J. Daley, Jr.  
Address: Dike Bronstein Roberts & Cushman  
Intellectual Property Practice Group of  
Edwards & Angell, LLP  
P.O. BOX 9169  
Boston, MA 02209  
Telephone No.: (617) 439-4444

**DATE ASSIGNMENT (DOCUMENT) EXECUTED (37 CFR 3.31(a)(7))**

6. The attached assignment (document) was executed on September 20, 2001; September 25, 2001 and September 26, 2001.

**LANGUAGE OF ASSIGNMENT (DOCUMENT) TO BE RECORDED**

**NOTE:** "The Office will accept and record non-English language documents only if accompanied by an English translation signed by the individual making the translation." 37 CFR 3.26.

7. The attached document:

is in the English language.  
 is not in the English language. An English translation signed by the individual making the translation and statement as to its accuracy is attached.

**ORIGINAL DOCUMENT OR TRUE COPY SUBMITTED**

**NOTE:** "Either the original document or a true copy of the original document may be submitted for recording. Only one side of each page shall be used. The paper used should be flexible, strong, white, non-shiny, durable, and preferably no larger than 21.6 x 33.1 cm. (8½ x 14 inches) with a 2.5 cm. (one-inch) margin on all sides." 37 CFR 3.24.

8. Submitted herewith is:

the original document.  
 a true copy of the original document.

**NOTE:** "If the original [assignment] document is two-sided or the wrong size, the practitioner can comply with the requirement [set out in 37 C.F.R. § 3.24] by providing a true copy of the original document using only one side of each page on the correct size paper." Notice of June 24, 1992, 1140 O.G. 63-76, at 67.

**NUMBER OF APPLICATIONS IDENTIFIED IN THIS COVER SHEET  
AND THE FEE**

**NOTE:** "All requests to record documents must be accompanied by the appropriate fee. Except as provided in paragraph (b) of this section, a fee is required for each application or patent against which the document is recorded as identified in the cover sheet. The recording fee is set in § 1.21(h). . . ." 37 CFR 3.41.

9. A. This cover sheet identifies only one application.  
B. The fee for recordal (37 CFR 1.21(h)) is \$40.00.  
[X] Attached is a check for \$40.00.  
[ ] Please charge Account \$40.00.  
A duplicate of this cover sheet is attached.

**STATEMENT (37 CFR 3.31(a)(9))  
AND SIGNATURE (37 CFR 3.31(a)(10))**

10. To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Date: October 4, 2001

William J. Daley  
Signature of Practitioner  
William J. Daley, Jr. (Reg. No. 35,487)  
Dike, Bronstein, Roberts & Cushman  
Intellectual Property Practice Group of  
PO BOX 9169  
Boston, MA 02209

**TOTAL NUMBER OF PAGES BEING SUBMITTED**

11. The total number of pages being submitted, including cover sheet, attachment(s), and document(s) are:

6  
Total number of pages submitted

United States Patent ~~or~~, or  
United States plus All Foreign Patent Rights

ATTORNEY DOCKET NO. \_\_\_\_\_

## ASSIGNMENT

Application No. \_\_\_\_\_

Filed \_\_\_\_\_

Insert Name(s) of Inventor(s) ➡ WHEREAS, Takehiro SHIOMOTO, Kenzo NOZAKI,  
Toshihiko YOSHIDA and Masayuki HONDA

(hereinafter designated as the undersigned) has (have) invented certain new and useful improvements in \_\_\_\_\_

Insert Title of Invention ➡ SEMICONDUCTOR LASER DEVICE, OPTICAL PICKUP AND  
FABRICATION METHOD OF SEMICONDUCTOR LASER DEVICE

for which an application for Letters Patent of the United States of America has been executed by the undersigned

Insert Date of Signing of Application ➡ on September 20, 2001, September 25, 2001 and September 26, 2001; and

Insert Name of Assignee ➡ WHEREAS, Sharp Kabushiki Kaisha

Insert Address of Assignee ➡ of 22-22, Nagaike-cho, Abeno-ku, Osaka-shi, Osaka, Japan

CHECK BOX IF APPROPRIATE ➡ its heirs, successors, legal representatives and assigns (hereinafter designated as the Assignee) is desirous of acquiring the entire right, title and interest in and to said invention and in and to any Letters Patent(s) that may be granted therefor in the United States of America and

➡  in any and all foreign countries.

NOW, THEREFORE, in consideration of the sum of Ten Dollars (\$10.00) to the undersigned in hand paid, the receipt of which is hereby acknowledged, and other good and valuable consideration, the undersigned has (have) sold, assigned and transferred, and by these presents does sell, assign and transfer unto said Assignee the full and exclusive right to the said invention in the United States of America, its territories, dependencies and possessions and the entire right, title and interest in and to any and all Letters Patent(s) which may be granted therefor in the United States of America, its territories, dependencies and possessions, and if the box above is designated, in any and all foreign countries;

and to any and all divisions, reissues, continuations and extensions thereof for the full term or terms for which the same may be granted.

The undersigned agree(s) to execute all papers necessary in connection with this application and any continuing, divisional or reissue applications thereof and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient.

The undersigned agree(s) to execute all papers necessary in connection with any interference which may be declared concerning this application or continuation, division or reissue thereof or Letters Patent(s) or reissue patent issued thereon and to cooperate with the Assignee in every way possible in obtaining and producing evidence and proceeding with such interference.

The undersigned agree(s) to execute all papers and documents and to perform any act which may be necessary in connection with claims or provisions of the International Convention for the Protection of Industrial Property or similar agreements.

The undersigned agree(s) to perform all affirmative acts which may be necessary to obtain a grant of a valid United States of America patent(s) or a grant of a valid United States of America and any foreign patent(s) to the Assignee and to vest all rights therein hereby conveyed to said Assignee as fully and entirely as the same would have been held by the undersigned if this Assignment and sale had not been made.

The undersigned hereby authorize(s) the request(s) the Patent and Trademark Office Officials in the United States of America and in any foreign countries to issue any and all Letters Patents resulting from said application or any continuing, divisional or reissue applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he has (they have) the full right to convey the entire interest herein assigned; and that he has (they have) not executed, and will not execute, any agreement in conflict herewith.

The undersigned hereby grant(s) the law firm of Dike, Bronstein, Robert & Cushman the power to insert on this Assignment any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office for recordation of this document.

The undersigned hereby covenant(s) that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment.

Date September 25, 2001 Name of Inventor Takehiro Shiomoto  
(signature) Takehiro SHIOMOTO

Date September 26, 2001 Name of Inventor Kenzo Nozaki  
(signature) Kenzo NOZAKI

Date September 20, 2001 Name of Inventor Toshihiko Yoshida  
(signature) Toshihiko YOSHIDA

Date September 26, 2001 Name of Inventor Masayuki Honda  
(signature) Masayuki HONDA

Date \_\_\_\_\_ Name of Inventor \_\_\_\_\_  
(signature)

Date \_\_\_\_\_ Name of Inventor \_\_\_\_\_  
(signature)